

IN THE CLAIMS

Please cancel Claims 27, 28, and 30, without prejudice or disclaimer of subject matter. Please amend Claims 26, 29, and 31-35, as indicated below. The following is a complete listing of claims and replaces all prior versions and listings of claims in the present application:

1. - 25. (cancelled)

26. (currently amended) An encoded data generation method for generating encoded data encoded in a JPEG2000 format, performed by a client apparatus including storage means for storing fragmentary first encoded data of JPEG2000 encoded data managed by a server apparatus, the method comprising:

a calculation step of calculating second encoded data from the JPEG2000 encoded data managed by the server apparatus, wherein the second encoded data is designated ~~by a user~~ as a portion of the JPEG2000 encoded data managed by the server apparatus and excludes the fragmentary first encoded data stored in the storage means;

a request step of requesting of the server apparatus the second encoded data obtained calculated in the calculation step;

an acquisition step of acquiring the second encoded data from the server apparatus;

a storage step of storing in the storage means the second encoded data ~~obtained~~
by acquired in the acquisition step;

a segmentation step of segmenting the JPEG2000 encoded data managed by
the server apparatus into a plurality of independent encoded data segments tiles, each
segment tile being a unit of display and including a plurality of layers;

a first determination step of determining for each independent encoded data
segment, whether all layer encoded data of the plurality of independent encoded data
segments are stored in the storage means whether each of the plurality of tiles is a complete
tile, wherein each of the plurality of layers of the complete tile is stored in the storage
means, or an incomplete tile, wherein at least one of the plurality of layers of the
incomplete tile is not stored in the storage means;

a dummy storage step of storing in the storage means dummy encoded data if
the layer encoded data is not stored in the storage means; and

an output step of outputting the dummy encoded data, the second encoded data,
and the fragmentary first encoded data stored in the storage means as encoded data having
JPEG2000 format;

a second determination step of determining whether each tile determined to be
the complete tile in the first determination step includes data encoded in the JPEG2000
format;

a removing step of removing, from the storage means, management information for managing each tile determined in the second determination step not to include data encoded in the JPEG2000 format;

a first encoding step of encoding, in the JPEG2000 format, data of each tile determined in the second determination step not to include data encoded in the JPEG2000 format;

a second encoding step of encoding, in the JPEG2000 format, dummy data in place of layers that are not stored in the storage means for each tile determined in the first determination step to be the incomplete tile, and maintaining in the storage means management information for managing each tile determined in the first determination step to be the incomplete tile; and

an output step of outputting data encoded in the first and second encoding steps, the data output in the output step being encoded in the JPEG2000 format.

27. - 28. (cancelled).

29. (currently amended) The method according to claim 26, wherein the dummy encoded data is zero length packet data ~~specified by~~ encoded in the JPEG2000 format.

30. (cancelled).

31. (currently amended) The method according to claim 26, wherein the client apparatus further comprises display means for displaying image data, wherein the fragmentary first encoded data is encoded data of the image data, and wherein said method further comprises:

a setting step of setting ~~[[the]]~~ a portion of the JPEG2000 encoded data managed by the server apparatus that is designated by the user by at least one of moving and enlarging a display region of the image data displayed ~~[[on]]~~ by the display means;

a decoding step of decoding the encoded data encoded in the JPEG2000 format output in the output step; and

a displaying step of displaying the decoded image data on a screen of the display means.

32. (currently amended) The method according to claim ~~[[27,]]~~ 26, wherein the first and second determination steps, the removing step, the dummy storage first and second encoding steps, ~~the substitution step~~; and the output step are processed in parallel for at least two segments tiles of the plurality of ~~independent encoded data segments tiles~~ obtained formed in the segmentation step.

33. (currently amended) An encoded data generation apparatus for generating data encoded in a JPEG2000 format ~~in a second computer including storage means for~~

storing fragmentary first encoded data of encoded data managed by a first computer, the apparatus comprising:

a first storage unit configured to store ~~[[the]]~~ fragmentary first encoded data of ~~[[the]]~~ JPEG2000 encoded data managed by ~~the first computer; a server apparatus;~~

a calculation unit configured to calculate second encoded data from the JPEG2000 encoded data managed by the server apparatus, wherein the second encoded data is designated ~~by a user~~ as a portion of the JPEG2000 encoded data managed by the server apparatus and excludes the fragmentary first encoded data stored in the first storage means; unit;

a request unit configured to request of the ~~first computer~~ server apparatus the second encoded data ~~obtained~~ ~~[[in]]~~ calculated by the calculation step; unit;

an acquisition unit configured to acquire the second encoded data from the ~~first computer; server apparatus;~~

a second storage unit configured to store the second encoded data ~~obtained~~ acquired by the acquisition step; unit;

a segmentation unit configured to segment the JPEG2000 encoded data managed by the server apparatus into a plurality of ~~independent encoded data segments;~~ tiles, each segment file being a unit of display and including a plurality of layers;

a first determination unit configured to determine, ~~for each independent encoded data segment, whether all layer encoded data of the plurality of independent encoded data segments are stored in the storage means; whether each of the plurality of~~

tiles is a complete tile, wherein each of the plurality of layers of the complete tile is stored in the first storage unit, or an incomplete tile, wherein at least one of the plurality of layers of the incomplete tile is not stored in the first storage unit;

a third storage unit configured to store dummy encoded data if the layer encoded data is not stored in the storage means; and

an output unit configured to output the fragmentary first encoded data, the second encoded data, and the dummy encoded data stored in the first storage unit, the second storage unit and the third storage unit, respectively, as encoded data having JPEG2000 format;

a second determination unit configured to determine whether each tile determined to be the complete tile by the first determination unit includes data encoded in the JPEG2000 format;

a removing unit configured to remove, from the first storage unit, management information for managing each tile determined by the second determination unit not to include data encoded in the JPEG2000 format;

a first encoding unit configured to encode, in the JPEG2000 format, data of each tile determined by the second determination unit not to include data encoded in the JPEG2000 format;

a second encoding unit configured to encode, in the JPEG2000 format, dummy data in place of layers that are not stored in the first storage unit for each tile determined by the first determination unit to be the incomplete tile, and maintaining in the first storage

unit management information for managing each tile determined by the first determination unit to be the incomplete tile; and

an output unit configured to output data encoded by the first and second encoding unit, the data output by the output unit being encoded in the JPEG2000 format.

34. (currently amended) The encoded data generation apparatus according to claim [[34,]] 33, wherein the [[first]] encoded data generation apparatus and ~~second computers can~~ the server apparatus communicate with each other via a network.

35. (currently amended) A computer-readable medium encoded with computer-readable instructions for causing a ~~second~~ computer including storage means for storing fragmentary first encoded data of JPEG2000 encoded data managed by a first computer server apparatus to ~~generate~~ perform a method for generating data encoded in a JPEG2000 encoded data, the instructions comprising: format, the method comprising:

a calculation procedure to calculate step of calculating second encoded data from the JPEG2000 encoded data managed by the ~~first computer;~~ server apparatus, wherein the second encoded data is designated ~~by a user~~ as a portion of the JPEG2000 encoded data managed by the server apparatus and excludes the fragmentary first encoded data stored in the storage means;

a request ~~procedure to request~~ step of requesting of the ~~first computer~~ server apparatus the second encoded data ~~obtained~~ calculated in the calculation ~~procedure;~~ step;

an acquisition ~~procedure to acquire~~ step of acquiring the second encoded data from the ~~first computer; server apparatus;~~

a storage ~~procedure to store~~ step of storing in the storage means the second encoded data ~~obtained by acquired in~~ the acquisition ~~procedure; step;~~

a segmentation ~~procedure to segment~~ step of segmenting the JPEG2000 encoded data managed by the ~~first computer server apparatus~~ into a plurality of independent encoded data segments; tiles, each segment tile being a unit of display and including a plurality of layers;

a first determination ~~procedure to determine; step of determining,~~ for each independent encoded data segment, whether all layer encoded data of the plurality of independent encoded data segments are stored in the storage means; whether each of the plurality of tiles is a complete tile, wherein each of the plurality of layers of the complete tile is stored in the storage means, or an incomplete tile, wherein at least one of the plurality of layers of the incomplete tile is not stored in the storage means;

a dummy storage ~~procedure to store in the storage~~ means dummy encoded data if the layer encoded data is not stored in the storage means; and

———— an output ~~procedure to output the dummy encoded data;~~ the second encoded data, and the fragmentary first encoded data stored in the storage means as encoded data having JPEG2000 format.

a second determination step of determining whether each tile determined to be the complete tile in the first determination step includes data encoded in the JPEG2000 format;

a removing step of removing, from the storage means, management information for managing each tile determined in the second determination step not to include data encoded in the JPEG2000 format;

a first encoding step of encoding, in the JPEG2000 format, data of each tile determined in the second determination step not to include data encoded in the JPEG2000 format;

a second encoding step of encoding, in the JPEG2000 format, dummy data in place of layers that are not stored in the storage means for each tile determined in the first determination step to be the incomplete tile, and maintaining in the storage means management information for managing each tile determined in the first determination step to be the incomplete tile; and

an output step of outputting data encoded in the first and second encoding steps, the data output in the output step being encoded in the JPEG2000 format.